



# HEALTH PROFILE AND COMMUNICABLE DISEASE OF THE COASTAL BELT: INSIGHT FROM VIZHINJAM KERALA

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## ABSTRACT

The Purpose of the study is to assess the extent of health condition of the coastal belt and underscoring the need for continuous monitoring and addressing the potential communicable disease concern. For this study fishing village Vizhinjam has been taken. Out of twenty wards, one fishing ward has been randomly chosen and from this ward fifty fishermen Households were selected through random lottery method. The study proves that poor health performance of this community vis a vis general rosy picture of the state. It is suggested that Environmental Hygiene is identified as an important component of preventive Social work.

**KEYWORDS:** Health ,Communicable Diseases , Health Care Utilization, Social Work

## INTRODUCTION

Health work and social work have been kindred. 'Health For All' strategy received a new dimension for implementation. It is now well accepted that health being an integral part of social development, has to extend beyond the focus of health care and health sector alone to a mere inter sectoral, interdisciplinary focus, both in policies and programmes, Health policy is part of the social policy.

Social work plays a key role in social development. The analysis of 'Health for All by Year 2000' presenting a people-oriented approach to the 'Health For All' strategy serves well as the contribution from social work for this global strategy.

Social work has been primarily concerned with the empowering individuals, groups and communities to work for socially desirable goals of society. Health has been rightly been defined as not only the absence of illness but the prevalence of congenial social, psychological and physical conditions where a person can achieve his/her optimum and enjoy life peacefully and satisfactorily. Poor health connotes poor social development, unsatisfactory social/familial life, unmet personal / social needs desires and responsibilities and causes dependency. Social work, therefore has been focussing on an enabling approach on the one hand and a clinical on the other, particularly helping the person with ailments in a medical setting.

Health is fundamental right of the people. The development process in any country may leave some of its regions and populations untouched. However, certain regions, certain populations suffer due to inequalities specially in access to a health services. Kerala is an obvious instance for which John Kurien (1994) remarks "as in all distributions, the Kerala model also has its outliers" - communities that seem to have left out of the domain of public action". This means that the fruits of the planned development have not reached the majority of poor people. Social work plays a key role in social development.

The present-day health problems are woven round the social and economic disequilibrium such as poverty, malnutrition, environmental degradation, faulty life styles and ignorance, depression, maladjustment, indifference, value crisis, personality stress and tension etc. are going to govern the lives of the people in the 21st century.

Health connotes a state of social well-being for which social work has an inbuilt concern since the latter's emergence either as charity or as profession. Actually the etiology of illhealth lies in the malfunctioning of the social system in terms of poverty, ignorance, population explosion, unemployment, old age, unhygienic living conditions bad housing, Poor nutrition and incompatible dietary habits, poor quality of drinking water and sanitary facilities etc. There is hardly any aspect of health care in which social and emotional factors can be ruled but for the purposes of diagnosis, treatment and in the work of prevention of illness. As the practice of medicine has grown more psycho, social, the role of social workers, with their social functioning orientation has increased in importance and in the broad spectrum of health delivery (Skidmore, 1982)

As we know, the 'Kerala Model' has received world wide attention. One reason for this is the apparent paradox of high quality of life in the State vis-a-vis its very low income (United Nations, 1975). Kerala's infant mortality rate of 13/1000, life expectancy of 72 years and adult literacy rate of around 90% are comparable to many Developed Nations of the world (Kabir and Krishnan, 1996; Antia, 1999). This high quality of life, for the population of Kerala taken as a whole, is represented by the 'Central tendency' (CDS 1975; Ratcliffe 1978; Rajeev 1983; Panikar and Soman 1984; Franke and Chasin 1989; Dreze and Sen 1989; and Jeffrey 1992). However, as in all distributions, the 'Kerala model' also has its 'Outliers' – communities that seem to have been left out this domain of public action (Drize and Sen 1989)

Fish and fish products are integral part of balance diet and Protein Supplement for a healthy life. Fish and Fisheries have a very significant place in the socio-cultural fabric of life in Kerala. However, we are faced with a situation where fishing communities in Kerala have not benefited for many decades from the increased value of output in the sector or the State's overall efforts at improving the quality of life (GOI 1992 and 1995; Zacharia and Irudayarajan, 1997; Census Commissioner of India, 1992; Director of Census Operations, 1992; Franke and Chasin, 1989, CMIE, 1998) The poverty of the marine fishing communities is proverbial. Living as they do on the geographic margins of the land depending exclusively on the sea for a livelihood, they have been left behind in the economic and more sharply in the socio-cultural. The only other occupational group in a similar circumstance are the tribal communities (Kurien, John 1994). The population density in marine fishing villages was around 2,652 per square Kilometre. This is in comparison to the State figure of 742 per square km, which is already one of the highest in the country. Thatched roofing is very common in Kerala, but thatched walls characterise the housing of the poor. (Kurien, John, 1994)

The basic amenities related to housing such as electric lighting, toilet facilities and access to water were also at for lower standards in the fishing villages. This lack of basic facilities give rise to strong negative reciprocal externalities between households. Contagious diseases in fishing villages spread very rapidly under these sordid physical conditions (Panikar and Soman 1984). In order to help such areas and person to enjoy their right and achieve better access and utilization, social work interventions are unquestionably useful.

## METHOD

Kerala has many achievements to its credit. In spite of these achievements Kerala has not been able to solve some of the basic problems like mass poverty, unemployment and caste discriminations. The development process in any country may leave some of its regions and population untouched. The inequitable and inefficient distribution of resources brings, sometimes, a dualistic nature of development even within a particular region. Therefore, a balanced allocation of resources for improving the well being of the human race is an objective of development all over the world.

Health care too, is not an exception. The availability of health care facilities and related amenities are so poor in certain areas even within a developed region. Kerala is an obvious instance for which John Kurien (1994) remarks "as in all distributions, the "Kerala model" also has its "Outliers" – communities that seem to have left out of the domain of public action". This means that the fruits of the planned development have not reached the majority of poor people.

As we know, the "Kerala model" has received worldwide attention. One reason for this is the high social sector development of the State vis-a-vis its poor per capita income (United Nations 1975). Kerala's Infant mortality rate of 13/1000, life expectancy of 72 years and adult literacy rate of around 90% are comparable to many developed countries of the

world (Kabir and Krishnan, 1996, Antia, 1999). But some recent studies have expressed scepticism of these development achievements (Antia 1999, Saradamoni, 1999; Parameswaran 1999). One special instance noted is the lack of the development achievements to all social sections in the State. For example, John Kurien has highlighted the Fisher folk as an 'outlier' to the growth performance of Kerala. The present study focuses on this aspect with special emphasis on health status.

The Purpose of the study is to assess the extent of health condition of the coastal belt and underscoring the need for continuous monitoring and addressing the potential communicable disease concern. Out of the twenty wards in Vizhinjam Panchayat, four consist exclusively of fishing community. Universe of these study focused on these fishing community. For this Study fishing village of Vizhinjam has been taken under consideration.

From the four fishing wards one was randomly chosen and from this ward fifty households were selected, at random using lottery method. Only catholic fishermen should be included in the 50-household sample survey. Fishermen from the Muslim and Hindu communities should be excluded from these survey. Primary Source of data is based on a sample survey, consisting of fifty households, with the help of interview schedule. Secondary sources of data are mainly from Kerala Sahitya Parishad, Sample Registration System, National Family Health Survey, Census of India (2001), CDS State Planning Board and the Bureau of Economics and Statistics. Data was collected by using the tool of direct communication with respondents and personal interviews.

Data collection was conducted at Vizhinjam Grama Panchayat, in the Neyyattinkara Taluk of Thiruvananthapuram District from 11th to 16th January 2005. Fifty households were covered and interviewed with those people. An interview schedule was used for the collection of data. We have not been able to go into all the yardsticks relating to health status. More specifically, we have not taken into account such variables as infant mortality rate, longevity and have considered mainly the crude death rates and rates of morbidity to assess the health condition of the community.

## DISCUSSION AND ANALYSIS

### Socio Economic Profile of Fishermen Community

The health status of a community can be assessed through measurement of existing health status of its people. The most notable among these are demographic structure, literacy rate, level of income, occupation, dependency ratio, housing, environmental conditions and access to healthcare facilities. We examine some of the socio-economic conditions of the fishing community in the surveyed area, which have a dent on the health conditions.

### Demographic Characteristics

As per the Panchayat Census and Development Report of 2001-02 the population of Vizhinjam Panchayat is about 47402. There were twenty wards in the Panchayat. Out of this, four wards consist entirely of the fishing community. The population of the surveyed household is 303. That is the average size of a household is 6.06. About 38% of the surveyed households have

more than one family under a single roof with a single kitchen. The reason behind this difficulty is the availability of land and the occupational compulsion that presses the fisherman to live near the sea. As John Kurien has remarked “every fisherman wishes to live on the sea front near the point where he lands his craft and from where he can observe the sea”. (Kurien 1994, P.8).

Age group	Males	Females	Total	% of Total
0-5	19	8	27	8.91
5-14	36	19	55	18.15
15-59	102	97	199	65.68
60+	12	10	22	7.26
Total	169	134	303	100

**Table: 4.1 Age Wise Distribution of Population**

It is interesting to note that 8.91% of the total population in the surveyed households are in the age group of 0-5, 18.15% in the age group of 5-14, 65.68% in the age group of 15-59 and 7.26% are in the age group above 60. Thus, about 70% of the total population falls in the working age group. Moreover, the proportion of the population in the age group 60+ is lower than the state figure 8.59% (COI, 2001). This reveals that the longevity in the area is lower than that of the state as a whole. Further, the survey shows a domination of males in all age groups.

#### Educational Status

Though Kerala shared the universal literacy with developed countries, the literacy rate of the surveyed households presents a backward position compared with State averages. We have considered persons above the age of 4 years for analyzing the educational status of the surveyed households. There are 276 persons in the 4+ ages in the surveyed households. Of this 74 (26.81%) are illiterates, and this is in sharp contrast with the State's claim of near universal literacy. It may be noted that both in absolute numbers and in proportionate terms illiteracy is greater among males than among females, out of the total illiterates, 55% are males.

Sex	Total Number of Persons in the Age Group 4+	Number of Illiterates	Percentage
Male	150	41	27.33
Female	126	33	26.19
Total	276	74	26.81

**Table 4.2: Sex Wise Illiteracy**

In order to probe further into the educational status we have classified the literates in the surveyed households on the basis of their educational attainments (Table 4.3). It shows that no men outnumber women in terms of their educational attainment at all stages of school education till they reach higher secondary education. This might be due to the heavy dropouts of male children from schools. Training of the males with the sea starts at very young age in order to equip them for fishing. To them schooling results in “pulling them out of their traditional occupations” (Kurien 1994). Besides, the seasons of good fish

catch attract the children to the shore, not only by its galore but also by the chances made open to them for making a trifling earning.

Level of Education	No. of Males	No. of Females	Total	% of Total
Lower Primary	27	35	62	27.80
Upper Primary	33	47	80	35.87
High School	18	27	45	20.18
Pre-degree/ Higher Secondary	15	9	24	10.76
Graduation	6	3	9	4.04
Post Graduation	2	1	3	1.35
Total	101	122	223	100

**Table 4.3: Level of Education**

#### Occupation and Earnings

In general, it is observed that, fishing is the occupation of the majority of the male population in the coastal area. There are so many difficulties that exist in the field of fishing as an occupation. Deep-Sea fishing with mechanised boats has raised the probability of accidents and even deaths. Age is not an absolute bar to desist a member of a fishing family from going to the sea. A fisherman would go for fishing as long as he is not disabled to face the rough sea. For analysing the occupational pattern of the males we have considered the population above 14 years. The total number of males above 14 in the surveyed household is 114. Out of this, 23 are students and 8 are unemployed, later includes four persons who have stopped going to the sea due to old age. Thus, the size of the male work force in the surveyed household is 83. Out of this 58 (70%) are fishermen, 8 (9%) are emigrants to the Middle East; 3 (3%) are employed under the government; 14 (16%) are in menial works, and the rest working as casual workers. From this one observation that may be noted is low level of unemployment. This is due to the fact that a member of the fishing community, the sea is always a benevolent employer.

For analysing the occupational pattern of females also we have taken 15 years of age as the lower bound. There are 107 female members in the age 15+ in the surveyed household; of this 54 (50%) are house wives, 13 (12%) are students. Out of the remaining, the workforce consists of only 40 members. Of this 35 (87%) are fish vendors. This implies the 3 (7.5%) are employed as tuition teachers, 2 (5%) are going for menial work. From this analysis there was a fact that is the low level female work force participation. Another important fact that the absence of women employed as fish vendor in the age groups below 35; of those employed in fish vending 9 each are in the age group 35 to 45 and 45 to 55, while one each is in the age groups 55-65 and 65+, indicating inter-generational changes in the occupational pattern in the surveyed household. The pattern of occupation that we have observed above in the case of males as well as females would indicate that main source of livelihood in the surveyed household is associated with fishing.

But fishing is highly seasonal and uncertain source of income and this makes it difficult to have any concrete estimate on the household income.

### Ownership of Land

The employment opportunities of fishing compel the fishermen to live on the shore. A fisherman generally settles down on the coast by building a house in the Puramboke lands on the shore. No household among the surveyed is found to possess any land other than the house that they live in. Only 23 (46%) households in the surveyed group own Pattayam for their hutments. The rest have no right of ownership to their houses rights, but live on the Puramboke. The major productive assets of the fishing community are the fishing equipments. But these are not distributed equally within the community. Among the surveyed households 6 (12%) were seen to own motorised country boats; 16 (32%) owned the traditional catamarans; the rest do not have any means of their own to go to the sea and depend on the boat owners either of the area or of the neighbouring areas as wage employees.

### Housing and Other related Amenities

Almost 66% of the total households surveyed are living in pucca houses built with bricks and rooted tiles. About 95% of the surveyed households are electrified; most of them are recently electrified with the help of Panchayat. About 43 percent of the households surveyed consists of more than one family. 30 percent have two families and 6 percent have three families. As per the data, about 80% of the total households use traditional wood burning Aduppu for cooking. 13% of the total households have kerosene stove while only 5% uses L.P.G. There is 2% household that use smokeless Choolah.

Drinking water is one of the scarce items in most of the coastal areas. It is seen that 100% of the surveyed households collects drinking water from outside agencies at the rate of Rupees 1/- per pot. Though there are five public wells in the surveyed area but they are not useful for drinking. More over most of the households do not have sufficient number of vessels for storing large quantities of water. This often compels the households to minimize the use of water. The drinking water in the Panchayat is poorly equipped to cater to the requirements. Many public taps have been reduced to mere show pieces. A proportion of residents have been dependent on water supplied by tanker lorries.

Fifty Eight percent (58%) of the surveyed households have no latrine at all. About 40% of the prevailing latrines were built by the Block Panchayat (Athiyanoor Block) and hence have become defunct. This implies that 75% of the surveyed households have no latrine facility and have to take resource to open defecation. In contrast, according to the K.S.S.P. Survey this is only 27.6% for the state as a whole (Kunhikannan and Aravindan 2000). A very interesting thing observed in the Survey-might be due to habits buttressed by lack of awareness arising from the lack of education and lack of contact with the outside world is that almost all the male members even the minority who have their own latrines, use the seashore for defecation. There is two paying toilet meant for women, built

by the Thiruvananthapuram Social Service Society (TSSS), was not functioning. Hence the women too defecate in the sea shore. But they cannot use the sea-shore for the purpose during day-light and hence, are compelled to attend to the nature's call either after the dusk or before the dawn. This practice the wide use of the sea shore for defecation has serious negative externalities for health and environment conditions in the area.

### Environmental Condition

The nearness to the sea and the settlement pattern of the fishermen households make the environmental conditions in the area as breeding ground for the spread of contagious diseases. To have a clear picture of the effects of these factors in the community health, the schedule contained some questions related to the disposal of waste water, disposal of domestic waste and water logging in the compound or in the immediate surrounding. The settlement pattern in the coastal belt stands in contrast to the one in the rest of Kerala. The general picture of the State is that each house is separated by its own compound and there is no cluster of houses. But, in the coastal areas the houses are clustered and there is no separate compound dividing one from the other. This is partly a result of the high density of population in the coastal area arising from occupational compulsion, which make the fishermen to live on the coast, not far away from the sea. Moreover, the absence of owned land makes the fishermen to cluster in the Puramboke land.

There is no drainage system in the surveyed area, and this, coupled with congestion, causes water disposed out of the hoses to get logged in the immediate surrounding. It may be noted that the survey was done in the non-rainy season and the situation generally worsens during the Monsoon. All the households surveyed households dispose the domestic waste in the waste disposal area which is few meters away from the place, dirty and unhygienic.

The poor personal hygiene of the populace is also contributing to their vulnerability to diseases. The water-borne diseases has struck in Vizhinjam, where the common problem of the coastal population continues to be the lack of safe water and sanitary hygiene. In many coastal areas, where the density of population is quite high a good proportion of dwellers are dependent on contaminated ground water sources.

### Health Condition of Fishermen Community

It is better to define the term health before going to analyse the health conditions of the surveyed households. Most people find it difficult although they are confident of its meaning, the most widely accepted one is that given by the World Health Organisation (WHO). According to WHO, "Health is a state of complete physical, mental and social well-being and not merely the absence of any disease or Infirmary". Therefore, analysing the health profile of any region should include all aspects of the physical, mental and social well-being. However, it is very difficult to make such an analysis. Moreover the data from the statistics on health available is actually data on ill health (Saradmoni, 1999) The health of a community can be assessed through measurement of existing health status of its people, such measurements are called 'health indicators'. Some of the



indicators used to examine the health profile are Crude Death Rate, Morbidity Rate, Maternal and Child Health and personal habits. The expectancy of life is considered to be the most important indicators of health are left out because of sample size, this chapter examines the health status of the surveyed households in relation to that of Kerala.

### Crude Death Rate (CDR)

CDR may be defined as the number of deaths per thousand populations per year in a given community. Number of deaths in the last one year preceding the date

of survey was considered for calculating the crude death rate. As per the data, the CDR in the surveyed area is 6.94 per thousand population which is much higher than the state figure 6.1 per thousand population.

### Morbidity

Morbidity may be defined as the incidence and prevalence of diseases or disabilities. Morbidity may be due to acute illness or be due to the chronic illness. To assess the general morbidity, we have considered a recall period of fourteen days, ie persons affected by any disease during the 14 days preceding the survey. For this, the respondents were asked to report whether anybody in the household was affected by any disease during the two weeks preceding the survey and also to report the nature of such disease. The recall period of two weeks was selected following the method followed by National Sample Survey and Kerala Sastra Sahitya Parishat (KSSP)

### Pattern of Morbidity

Table 5.1 shows the pattern of acute morbidity in the surveyed households. Diarrhoea, which accounts for 14.75 percent of the total morbidity. 29.70/1000 population in the surveyed households were acutely morbid due to diarrhoea. It may be the rest of the state of corresponding level of morbidity is only 1.5 per thousand and majority of the people do not get clean potable drinking water and poor environment sanitation spread the disease in the coastal areas. It is interesting that the survey was conducted during the month of February. During the rainy season, diarrhoeal incidence goes up due to the worsening environmental conditions. Moreover during monsoon, the occurrence of the disease become massive. Another commonest disease is fever, which is similar to the situation of Kerala. About 29 percent of the total morbidity in the surveyed household is attributed to fever. However, fever is a symptom rather than a disease, though in Kerala 'Pani' (fever) is a very generic term used to denote a vast number of disease.

Type of illness	Male	Female	Total	Rate per 100 population
Diarrhoea	4	5	9	29.70
Fever	5	13	18	59.40
Hepatitis	3	5	8	26.40
Asthma	1	1	2	6.60
Hyper tension	0	1	1	3.30
Others	10	13	23	75.91

Total	23	38	61	201.32
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**Table 5.1: Morbidity Pattern (Acute)**

Connected with diarrhoeal diseases, we collected information on the awareness and use of ORS. 95% of the surveyed households are aware of ORS higher than the state average 89% (IPS, 2000) but only 30% use such knowledge during diarrhoea. The category others in the table includes mainly pains of various types. Chest and back, on the joints, head ache and stomach ache. In this case too the female of the surveyed household outnumber the males. However, for these cases of aches and pains, physicians help is generally not sought. Instead the affected persons steadily go to the near by medical stores and take 'pain killer' given by the pharmacist.

### Chronic Morbidity

The rate of chronic morbidity in the surveyed population is higher than that of Kerala. Sixty-three persons in the surveyed households were reported as chronically morbid. This comes to about 207.92 per thousand population. The corresponding rate in Kerala was 138.02 in 1987 and 114.6 in 1996 (Kannan et. al 1991, Kunhikannan and Aravindan 2000)

### Pattern of Chronic morbidity

Table 5.2 shows the pattern of morbidity among males and females. Rheumatism is found to be a very common disease in the coastal area. It account for about 33% of the chronic morbidity reported. This might probably due to the openness to the cold climate. Of the total chronic morbidity diseases of respiratory system account for 23.81 percent. Of this Bronchial Asthma has the largest share with an incidence of 26.40 per thousand population. It may be noted that the corresponding figure for Kerala is 14.25 (Kunhikannan 2000). This high incidence of the disease in the surveyed population would probably due to the climatic conditions, poor housing condition, use of traditional choolahs and tobacco consumption.

Type of Disease	No. of male	No. of Female	Total	Rate per 100 population
Rhenumatism	7	14	21	69.21
TB	2	3	5	16.50
Asthma	3	5	8	26.40
Cough	1	1	2	6.60
Hyper tension	0	4	6	19.80
Heart problem	0	1	1	3.30
Abdominal problem	3	1	4	13.20
Hyper Acidity	1	0	1	3.30
Stomachache	0	1	1	3.30
Hook worm	1	0	1	3.30
Piles	0	1	1	3.30
Uterus problem	0	1	1	3.30
Eye problem	3	1	3	3.30
Disease of skin	1	2	3	9.90
Others	3	2	5	16.50
Total	27	36	63	207.92

**Table 5.2: Pattern of Chronic morbidity**

Though T.B cannot strictly be included in the diseases affecting the respiratory system, we have included it under the category of respiratory diseases since all the cases reported are pulmonary Tuberculosis. The sample population shows a higher prevalence rate of TB (16.50/1000) than that for the State as a whole (4.16/1000) (Kunhikannan and Aravindan 2000). About 9 percent of the total chronic morbidity in the surveyed population is accounted for by hyper tension and about 1.59 percent by heart problems. The prevalence rate of cardiac diseases is just higher in the surveyed population (6.60/1000) than in the rest of Kerala (5.98/1000). Gastro Intestinal Troubles (GIT) account for 9.52 percent of the total morbidity load in the surveyed population. The morbidity rate of all Gastro intestinal diseases, which would include acid peptic diseases, helminthiasis and stomach ache taken together in the surveyed population is 23.10 per thousand. The corresponding figure for the state is given by the K.S.S.P survey is 5.46. The higher incidence of GIT in the surveyed population might be due to unhygienic environment, lack of food intake at regular intervals and the habit of pan chewing and smoking. Disease of the eye (4.76%) skin (4.76%) are seen in relatively low proportions in the surveyed population. In the case of skin diseases, the morbidity load in the state as found in the K.S.SP survey is 5.24% (2000). The corresponding figure in the present survey is 9.90, thanks to the poor environmental and hygienic conditions among the surveyed population. The morbidity load of eye diseases is also found to be higher in the surveyed population (9.90/1000) than in the K.S.S.P survey (1.3/1000). The higher figure might be an indicator of the level of malnutrition among the surveyed population. It may be noted that the usual food of the fisherman households consists of rice, tapioca and fish.

### Handicap

There are 3 persons in the surveyed population with physical handicap, affecting movements. This comes to about 9.90/1000 population which is higher than the state figure of 3.8 (Kunhikannan and Aravindan 2000).

### Maternal and Child health

The maternal and child health is considered to be one of the important indicators of health. For assessing the maternal and child health of the surveyed households the study collected information regarding the type and place of deliveries that took place in the one year preceding the date of survey, birth weight of the newborns and the immunization given to the infants.

### Delivery

All the women who had child-birth during the one year preceding the survey had consulted a gynaecologist during pregnancy, starting from the early stage and all the births that took place in the surveyed households during the period were institutional. 5 out of the nine deliveries were in private hospitals, and the rest were in government hospitals. Nevertheless the shift to institutional deliveries is recent. Majority of the women in the age group above 35 years in the surveyed households had their deliveries at home unattended by any medical person.

### Birth weight

The average birth weight of the babies borne during one year

preceding the survey was 3.17 kg which is much higher than that found for the State in the recent KSSP study. Out of the 8 births in the surveyed household during the reference period, there had birth weight between 2.5 and 3 kg, two had birth weight between 3 and 3.5 Kg and four weighted and four weighted between 3.5 and 4 kg. The birth weight of the female babies is seen to be higher than that for male babies.

	Present study	KSSP 1996
Average birth weight of total babies	3.17 Kg	2.87 Kg
Average birth weight of male babies	3.17 Kg	2.95 Kg
Average birth weight of female babies	3.24 Kg	2.80 Kg
Percentage of low weight babies	0.00	13.3 Kg

Source: Kunhikannan and Aravindan, 2000

**Table 5.3: Birth weight of babies**

It is interesting to note that no baby had birth weight below 2.5 kg. This is sharp contrast to the situation in the state and may be one exception to the overall poor health performance in the study area.

### Immunization

Table 5.4 shows the acceptance of child immunization in the surveyed households. For the purpose we have considered immunization among infants born during one year preceding the survey. The short reference period of one year was selected to facilitate effective recalling.

Type of Vaccination	Percentage to total newborns
Given all the vaccinations	78.6
Given only triple	6.7
Given only Polio	0
Given only Measles	0
Given in BCG	6.7
Given more of the vaccinations	8

**Table 5.4: Percentage of infants who have undergone vaccination**

It may be noted that only 8 percent of the babies in the age group 0-1 in the surveyed households had no immunization and 78.6 percent of the infants had all the vaccines coming under the standard immunization programme adopted in the State. But the proportion of children at the state level who had no vaccination is only 2.2 percent (IIPS 2000). Interestingly all the mothers, who had child birth during the reference period are aware of vaccination, but the high prevalence of non-vaccination is mainly due to the fear of the respective mothers in getting the children vaccinated.

### Personal habits

Information regarding personal habits like consumption of alcohol, smoking, chewing of pan should be deemed as important in the health status of a population because by themselves, they have been proved as contributory causes to a number of chronic and fatal diseases (Kaman et. al, 1991)

### Alcohol Consumption

Consumption of alcohol is more prevalent than either smoking or pan. It is the habit of males, the habit is prevalent only among those above the age of 14 years. About 55% total male population above the age of 14, is alcohol consumers. 'Arrack' and 'Toddy' are the common liquors used in the area. Those who use liquor it regularly despite the seasonality and uncertainty of income.

### Smoking

Smoking is seen to be prevalent in the surveyed population, only among those who are aged above 14 years. Out of the 276 people above the age of 14, 7.45% are found to be smokers. Women constitute about 12.5% of the total smokers. The majority of the smokers use 'beedies' constituting 69.8 percent of the total number of smokers. Nevertheless, beedi smoking is more common among the elders while cigarette is more common among those who are aged below 35.

### Chewing of Pan with tobacco

Chewing of pan is more common than smoking in the surveyed households. About 30% of the total population above the age of 14 years is found to be pan chewers. About 5% of the population below 14 years is also found to be pan chewers. Of the total population 86% are males and the rest are females. All the males who use pan are fisherman and all the women pan chewers are fish vendors. To them chewing of pan is a mid time meal (in between every time of having meals, pan would be in the mouth of all of them).

The health status of the fishing village stands differentiated from the general health picture of the State. This is borne out by the higher levels of morbidity and mortality indicators. The diseases, which account for the high morbidity in the surveyed area are those induced by poverty, squalor and lack of human basic amenities and is a reflection of socio-economic conditions.

### Health Care Utilization and Expenditure

In the preceding part we discussed some of the indicators of the health status of the surveyed population. One of the factors that determine health status is the availability and utilization of health care facilities. In this Section we discuss some aspects connected with the utilization of health care and pattern of health expenditure in the surveyed population.

### Health Care Facilities

According to the panchayat census and Development Report 2002 of the Vizhinjam Panchayat, the Panchayat has one Primary Health Centre, established in 1996 and a Community Health Centre (C.H.C) it was situated in the territories of Venganoor Panchayat. The average distance to the C.H.C from the surveyed households is one KM. As at present the C.H.C has 3 doctors; one resides near the hospital while the other two are commuter

Staff Pattern	Number of Sanctioned	No. of existing
Surgeon	1	0
Gynaecologist	1	1

Paediatrician	1	0
Anaesthetist	1	0
Non-specialist doctors	4	3
Staff nurses	5	3
Nursing assistant	5	2
Second grade assistant	5	2

**Table 6.1: Availability of Medical Personnel in C.H.C**

Table 6.1 shows the sanctioned staff pattern and the number of staff members working at the C.H.C at present. Besides the Community Health Centre, there is one Primary Health Centre, One Homoeo Hospital, One Midwives Centre and One sub centre are here. In the private sector there are four allopathic, four Ayurvedic, two Siddha hospitals and 3 Dental dispensary in the Panchayat area. The existence of these private hospitals might be a result of the insufficiency of efficient health care facilities provided by the government. The private agencies seem to be filling the gap between government's failure to supply adequate medical facilities and the demand for the health care. However, the hospitals and dispensaries in the area, both in the government and private sectors are only emits of first consultation and in cases of serious illness reference is given to hospitals in Thiruvananthapuram, which is 16 KM distant from the locale of the surveyed population.

### Utilization of Health Care Facilities

Utilization of health care facilities is analysed with two weeks as the reference period. For this, the schedule contained questions, regarding the type and place of treatment during the two weeks preceding the survey.

### Type of treatment

Table 6.2 shows various types of treatment, by system of medicine, undergone by the population in the surveyed households, during the reference period. The last column, taken from the K.S.S.P studies, compare the situation with that in Kerala.

System of Treatment	Sample	KSSP 1996
Modern Medicine	85.7	78.8
Ayurveda	3.6	11.4
Homeopathy	1.8	7.2
Others	8.9	2.6

**Table 6.2: Proportion of persons using various types of treatment (Percentages)**

It is seen that Allopathy, as in the rest of Kerala, is the most popular system of medicine among the surveyed households nearly 85 percent of the population use the system. Only a very small percentage of the population uses Ayurveda and Homoeopathy. A larger proportion of the population than in the State comes under others. But it is seen that nearly 60 percent of the population who fall under this category had their treatment under the Sidha and Marma system, a Tamil variant of Ayurveda; the rest had taken recourse to the native healers, who are the common practitioners in clearing minor Orthopaedic problems and joint pains, which the fishermen come across in



association with their work.

### Place of Treatment

It is found that about 1.1.% of the patients did not take any kind of treatment during the episode of illness in the reference period of two weeks, which 11.7 percent had resorted to self treatment. These stand in contradiction to what has been observed for the State in the KSSP survey.

Place of Treatment	Survey	Kerala 1996
Government Hospital	38.2	28.57
Private hospital	22	58.01
Doctor's residence	24.6	--
Others	2.4	4.76
Self treatment	11.7	8.57
No treatment	1.1	0

**Table 6.3: Population treated according to the place of Treatment (Percentages)**

It is found that 38.2 percent of the persons in the surveyed households is visiting government hospitals. For Kerala, the corresponding figure is 28.57%. Consequently, the proportion of population who make use of private hospitals is small (22%) compared to State. Nevertheless, almost 24 percent of the sick in the surveyed population visit the doctors at home, while the corresponding figure obtained by the K.S.SP survey is negligible for the state as a whole.

### Utilization of the C.H.C

It is noted that 100 percent of the surveyed households are aware of the nearby C.H.C, as against 88.9% found for Kerala (IIPS 2000). However, only 72% of the households have ever made use of the C.H.C. It is observed that all the households, who are reported to be visiting the C.H.C, prefer to consult the doctor who resides near the hospital and on whom they have confidence. But, since this doctor is busy in the hospital and since the patients have to wait for long hours in the queue to visit him there, most of them postpone the visit to the CHC and make private referral to the doctors residence in the evening or in the morning.

### Reasons choosing Private hospitals

About 28% of the total households prefer to visit private hospitals. The reasons for this preference are summed up in the following table.

Reasons	% of Households who prefer to visit private hospitals
Defects of government hospitals	38
Merits of private hospitals	46
Private hospital is near	16
Other reasons	1

In the defects of Government hospitals, the respondent included: lack of medical personnel, lack of medicines, unhygienic environment and lack of facilities such as latrines and longer distance. The merits of private hospitals reported were: full

time available service of doctors and nurses, good attention and care and nearness to the residence.

### Health expenditure

The study collected information regarding the amount of health care expenditure per morbid person for the past fourteen days from the date of survey. This includes expenditure on medicines, consultation fee and other expenses like transportation. The results are given in Table 6.5

Items of expenditure	Average expenditure per morbid person in the sample	Average expenditure per morbid person in Kerala
Medicine	190	84
Fee	60	30
Others	108	52
Total	358	165

**Table 6.5: Medical Expenditure per morbid person**

Average health care expenditure per morbid person is higher in the surveyed households than that for Kerala. However, the figures on Kerala are those based on the K.S.S.P survey in 1996 and since then the expenditure might have increased due to rise in prices.

The major item of health expenditure as shown by the table, is on drug. This accounts for about 53% of the total expenditure. it may be noted that the expenditure on this item in the surveyed households is almost two times that for the State. This would partly be due to the phenomenal rise in drug price during the last 5 years. But, the people who visit the CHC are prescribed to buy medicines from outside because of the short supply of drugs from the health department. Moreover, as we noted earlier, a fairly good proportion of the persons visit the doctor at his residence, and buy medicines from the market. The higher expenditure incurred on fees by the surveyed households is also due to the practice of making private visits.

The expenditure on other items in the surveyed households is also almost two times that observed for Kerala. The major item in the category is transport and hence the difference would be partly be a reflection of the increase in transportation cost since 1996. However, the surveyed households are entirely on the beach, which is not connected with the hospitals by bus. Hence, the principal means of transport, especially during sickness, is either Auto Rikshaw or car. However in calculating the expenditure, we have not considered the opportunity cost of the patients or of the by standers who stay with the sick during hospitalization. Lost man-days are much valuable to the fishermen because of their highly uncertain and seasonal occupation.

It is seen that the governmental system of medical care in the surveyed area is fraught with numerous problems- lack of medical and paramedical personnel, insufficient supply of medicines, lack of basic amenities, long queues, insufficiency of toilets, and unhygienic environment. These make the people in the surveyed households to depend increasingly on the private system of medical care and on private consultation with the



doctor in the government service during non-office hours. This keep the medical expenditure of the surveyed households high and the average medical expenditure per morbid person in the surveyed households is almost two times as that in Kerala. All the components of cost are higher in the surveyed households than in the rest of the State.

### Conclusion

The social sector development of Kerala has left certain sections of its society untouched. One such section is the fisher folk living along the coastal belt. The present study proves that the poor health performance of this community vis-a-vis the general rosy picture of the State. However, the study is based on a small sample and, therefore, we have not been able to go in to some of the crucial indicators of health status. Moreover the conclusions drawn can only be tentative.

Judged from the Kerala standards, the fishermen community is marked by lower levels of longevity and higher levels of mortality and morbidity. The water-borne diseases has struck in Vizhinjam, where the common problem of the coastal population continues to be lack of safe water and sanitary hygiene. A good proportion of residents have been dependent on water supplied by tanker lorries, at Rupee. 1/- per pot. On the sanitation front, though an estimated 65% of the population have toilets at their households, the deficit of latrines is alarmingly deficit in the coastal area. The solid waste removal is also poor leading to accumulation of garbage in open places and clogging of drains. Needless to say, the availability and utilization of health care can be one of the elements that influence health status. The provision of health care facilities under the government is not sufficient in the coastal belt. The poor personal hygiene of the populace is also contributing to their vulnerability to diseases. At Vizhinjam for instance, distinctly murky water from a stream continues to a major bathing/washing source for villagers. In fact, past studies on water samples at Vizhinjam have recorded more than 1,000 coliforms per 100 ml. And wells and septic tanks were separated only by a few metres leading to instant contamination of the water source. Meanwhile, experts are pointing out that pit latrines and septic tanks just many not be the suitable sewerage management mechanism in water logged terrains. The lack of cohesion between departments is also leaving an impact on the critical components of preventive strategies. Villages were remarkably sceptical about the measures being undertaken by the administration. Environmental hygiene is identified as an important component of preventive care. It is estimated that 70 percent of communicable disorders are linked to poor environmental hygiene. Almost 60 diseases are transmitted to human through vectors such as flies, rats and mosquitos.

It is Suggested that the community should altered should altered through intensive and extensive information, education, communication activities to take all precautionary measures - such as drinking only boiled and cooled water, proper cooking of all sea food especially shell, fish etc. Health education classes to be arranged in all schools involving teachers etc. by Social work . Provision of Tetra cycline the first line drugs of choice in the District Medical Store and Peripheral health institutions. All wells in the Panchayat should be chlorinated.

### Notes

<sup>1</sup>It is interesting to note that the above figures on the source of drinking water stand in sharp contrast to those for the state as a whole. The Kerala Sastra Sahitya Parishat's study in 1996, showed that 65.1 percent of the population that their study covered was served by own well, 17.6 percent by public well, 7.5 percent by public tap and 4.2 percent by house tap (Kunhikannan and Aravindan, 2000). At the Vizhinjam Grama Panchayat and estimated 70% of the population depend on well water. While 14% access to public taps, 12 percent have water connections and 4% depend on community well.

<sup>2</sup>Distribution of Diarrhoea cases to Drinking water source

Source of Water	% of Diarrhoea cases
Own well/tap	14
Other's Well	54
Public well	22

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